

**Montana Board of Oil and Gas Conservation  
Environmental Assessment**

**Operator:** Primary Petroleum Corporation  
**Well Name/Number:** Benton Bench 4-5-28-4  
**Location:** NW NW Section 5 T28N R4W  
**County:** Pondera, **MT;** **Field (or Wildcat)** Wildcat

**Air Quality**

(possible concerns)

Long drilling time: No, 10 to 14 days drilling time.

Unusually deep drilling (high horsepower rig): No, double/triple derrick drilling rig to drill to 4,500' TD Duperow Formation.

Possible H2S gas production: Yes possible H2S gas production.

In/near Class I air quality area: No Class I air quality area.

Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under rule 75-2-211.

Mitigation:

☒ Air quality permit (AQB review)

☐ Gas plants/pipelines available for sour gas

☐ Special equipment/procedures requirements

☐ Other: \_\_\_\_\_

Comments: No special concerns – using triple derrick drilling rig to drill to 4,500'

TD.

**Water Quality**

(possible concerns)

Salt/oil based mud: No, freshwater and freshwater mud system. Surface to total depth will be drilled with freshwater/mud system.

High water table: No high water table anticipated.

Surface drainage leads to live water: No, closest drainages are an unnamed ephemeral tributary drainage to the Spring Creek, about 1/32 of a mile to the northeast and an unnamed ephemeral tributary drainage to the Dry Fork of the Marias River, about 5/8 of a mile to the northwest from this location.

Water well contamination: None, no water wells within 1 mile and further away from this well location. This well will drill surface hole with freshwater, set 750' of steel surface casing and cement to surface.

Porous/permeable soils: No, sandy silty bentonitic soils.

Class I stream drainage: None

Mitigation:

☐ Lined reserve pit

☒ Adequate surface casing

☐ Berms/dykes, re-routed drainage

☒ Closed mud system

☐ Off-site disposal of solids/liquids (in approved facility)

☐ Other: \_\_\_\_\_

Comments: 750' of surface casing cemented to surface adequate to protect freshwater zones. Freshwater mud to be used to drill from surface to total depth.

**Soils/Vegetation/Land Use**

(possible concerns)

Stream crossings: None anticipated.

High erosion potential: No, moderate cut, up to 15.8' and small fill, up to 9.2', required.

Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, 300'X300' location size required.

Damage to improvements: Slight, appears to be grazing land.

Conflict with existing land use/values Slight

Mitigation

☐ Avoid improvements (topographic tolerance)

☐ Exception location requested

☒ Stockpile topsoil

☐ Stream Crossing Permit (other agency review)

☒ Reclaim unused part of wellsite if productive

☐ Special construction methods to enhance reclamation

☐ Other \_\_\_\_\_

Comments: Access will be over existing county road, Dupuyer Road and over private farm/ranch roads. Cuttings will be stockpiled on location. Drilling fluids will be recycled to the next drilling location. No pit will be utilized. No special concerns.

### Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Nearest residences are about 1.25 miles to the southwest and about 1.5 miles to the east southeast from this location.

Possibility of H2S: Yes H2S possible.

Size of rig/length of drilling time: Triple derrick/Double drilling rig/short 10 to 14 days drilling time.

Mitigation:

☒ Proper BOP equipment

☐ Topographic sound barriers

☐ H2S contingency and/or evacuation plan

☐ Special equipment/procedures requirements

☐ Other: \_\_\_\_\_

Comments: No concerns. Distance is sufficient to not be a problem with noise.

### Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified.

Creation of new access to wildlife habitat: No

Conflict with game range/refuge management: No

Threatened or endangered Species: Threatened or endangered Species listed on USFWS website for counties in Montana lists the following: Piping Plover, Grizzly Bear and Canada Lynx. Candidate species listed are the Sprague's Pipit, Wolverine and the White bark pine. NH Tracker website lists the following as species of concern two (2) Ferruginous Hawk and the Burrowing Owl.

Mitigation:

☐ Avoidance (topographic tolerance/exception)

☒ Other agency review (DFWP, federal agencies, DSL)

☐ Screening/fencing of pits, drillsite

☐ Other: \_\_\_\_\_

Comments: State of Montana Trust Land grazing lands. Trust Lands will do surface EA.

### Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites None identified

Mitigation

☐ avoidance (topographic tolerance, location exception)

☒ other agency review (SHPO, DSL, federal agencies)

☐ Other: \_\_\_\_\_

Comments: State of Montana Trust Land grazing lands. Trust Lands will do surface EA.

### Social/Economic

(possible concerns)

☐ Substantial effect on tax base

☐ Create demand for new governmental services

☐ Population increase or relocation

Comments: Wildcat well, until production is established no social/economic concerns can be evaluated. No concerns

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\_\_\_\_\_  
\_\_\_\_\_

### Remarks or Special Concerns for this site

Well is a 4,500' TD Duperow Formation test.

### Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected. Some short term impacts will occur, but can be mitigated in a short time.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/Steven Sasaki \_\_\_\_\_

(title:) Chief Field Inspector \_\_\_\_\_

Date: December 8, 2011 \_\_\_\_\_

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website \_\_\_\_\_

(Name and Agency)

Pondera County water wells.

(subject discussed)

October 1, 2011

(date)

US Fish and Wildlife, Region 6 website

(Name and Agency)

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES

MONTANA COUNTIES, Pondera County

(subject discussed)

October 1, 2011

(date)

Montana Natural Heritage Program Website (FWP)

(Name and Agency)

Heritage State Rank= S1, S2, S3, T28N R4W

(subject discussed)

October 1, 2011

(date)

If location was inspected before permit approval:

Inspection date: \_\_\_\_\_

Inspector: \_\_\_\_\_

Others present during inspection: \_\_\_\_\_